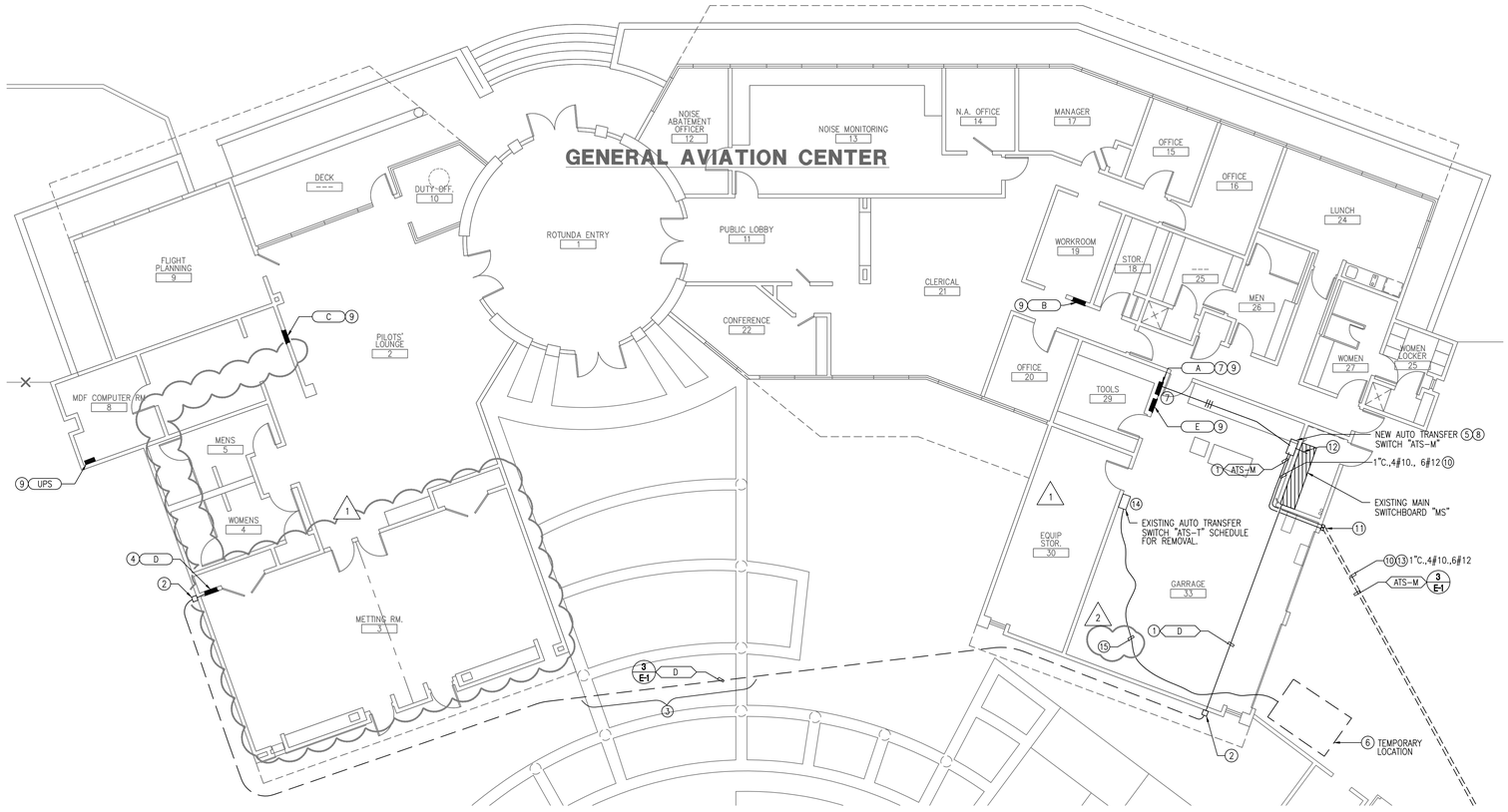


NEW

PANEL "D" — 120/208 VOLTS, 3 PHASE, 4 WIRE — MAIN BKR: 125A.,3P — LOCATION: MEETING ROOM #3 — FEEDER — 125 A. BUSSING — ENTER CAB'T. AT: BOTTOM — FLUSH MTG.

REMARKS	T/C CONT. LEVEL	LOCATION	VOLT AMPS ϕA	VOLT AMPS ϕB	VOLT AMPS ϕC	LTG or LCL	REC	WIRE	CIR	BKR		BKR	CIR	WIRE	REC	LTG or LCL	VOLT AMPS ϕA	VOLT AMPS ϕB	VOLT AMPS ϕC	LOCATION	T/C CONT. LEVEL	REMARKS
–	–	FUT. WEST WALL PLUGMOLD	900			–	–	1	1	20/1		20/1	2	1	–	–	900			FUT. EAST WALL PLUGMOLD	–	–
–	–	FUT. WEST WALL PLUGMOLD		900		–	–	1	3	20/1		20/1	4	1	–	–		900		FUT. EAST WALL PLUGMOLD	–	–
–	–	FUT. WEST WALL PLUGMOLD			900	–	–	1	5	20/1		20/1	6	1	–	–			900	FUT. EAST WALL PLUGMOLD	–	–
–	–	FUT. NORTH WALL PLUGMOLD	1500			–	–	1	7	20/1		20/1	8	1	–	–	1000			FUT. LED FLAT TV MONITOR	–	–
–	–	FUT. NORTH WALL PLUGMOLD		1500		–	–	1	9	20/1		20/1	10	1	–	–		1000		FUT. LED FLAT TV MONITOR	–	–
–	–	FUT. NORTH WALL PLUGMOLD			1500	–	–	1	11	20/1		20/1	12	1	–	–			1000	FUT. LED FLAT TV MONITOR	–	–
–	–	FUT. NORTH WALL PLUGMOLD	1500			–	–	1	13	20/1		20/1	14	1	–	–	1000			FUT. LED FLAT TV MONITOR	–	–
–	–	FUT. CEILING PROJECTOR		1000		–	–	1	15	20/1		20/1	16	–	–	–		1000		FUT. LOAD	–	–
–	–	FUT. CEILING PROJECTOR			1000	–	–	1	17	20/1		20/1	18	–	–	–			1000	FUT. LOAD	–	–
–	–	SPARE	0			–	–	–	19	20/1		20/1	20	–	–	–	1000			FUT. LOAD	–	–
–	–	SPARE		0		–	–	–	21	20/1		20/1	22	–	–	–		1000		FUT. LOAD	–	–
–	–	SPARE			0	–	–	–	23	20/1		20/1	24	–	–	–			1000	FUT. LOAD	–	–
–	–	SPACE	–			–	–	–	25	–		–	26	–	–	–	–			SPACE	–	–
–	–	SPACE		–		–	–	–	27	–		–	28	–	–	–		–		SPACE	–	–
–	–	SPACE			–	–	–	–	29	–		–	30	–	–	–			–	SPACE	–	–
–	–	SPACE	–			–	–	–	31	–		–	32	–	–	–	–			SPACE	–	–
–	–	SPACE		–		–	–	–	33	–		–	34	–	–	–		–		SPACE	–	–
–	–	SPACE			–	–	–	–	35	–		–	36	–	–	–			–	SPACE	–	–
–	–	SPACE	–			–	–	–	37	–		–	38	–	–	–	–			SPACE	–	–
–	–	SPACE		–		–	–	–	39	–		–	40	–	–	–		–		SPACE	–	–
–	–	SPACE			–	–	–	–	41	–		–	42	–	–	–			–	SPACE	–	–

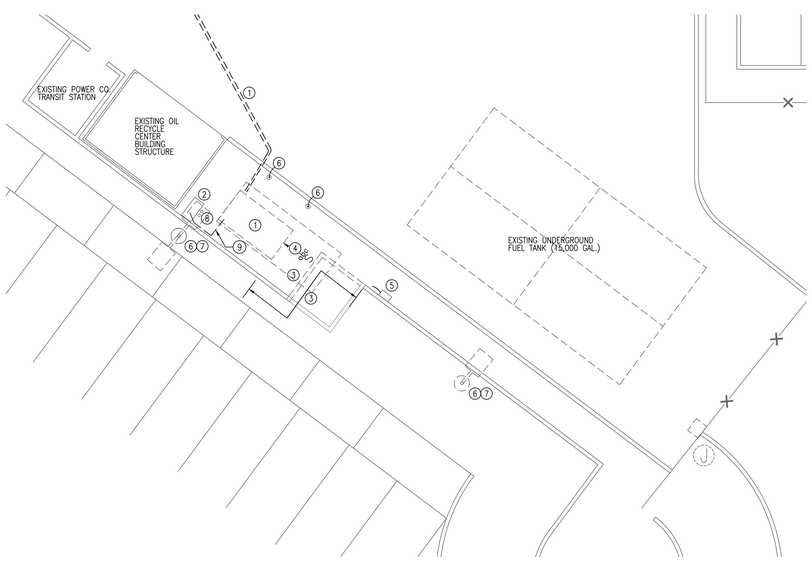
- ϕA= 7800 VA — ϕB= 7300 VA — ϕC= 7300 VA
- **TOTAL CONNECTED LOAD:** 22400 VA OR 62.2 AMPS @ 208 VOLTS – 3 ϕ
- **LCL:** 0 VA x 125% = 0 VA
- **FDL:** 22400 VA OR 62.2 AMPS
- BKCR = HACR TYPE CIRCUIT BREAKER — L/O = PROVIDE LOCK-OFF DEVICE ON CIRCUIT BREAKER — AFCI = ARC FAULT INTERRUPTING TYPE CIRCUIT BREAKER
- GFCI = GROUND FAULT INTERRUPTING TYPE CIRCUIT BREAKER

ALL PANEL BOARD BRANCH CIRCUIT BREAKERS THE FOLLOWING SHALL APPLY: ON ALL MULTI-WIRED HOMERUN CIRCUIT BREAKERS (REFER TO PLANS TO DETERMINE 2 AND/OR 3 HOMERUNS), CONTRACTOR SHALL FIELD INSTALL ON ALL MULTI-USE CIRCUIT BREAKERS APPROVED HANDLE TIE (PER CEC 210.4(B))

REFERENCE NOTES:

1. RUN FEEDER EXPOSED TIGHT TO UNDERSIDE OF CEILING.
2. PROVIDE LB CONDULET WHERE CONDUIT PENETRATE THROUGH WALL AND RUN CONDUIT SYSTEM BELOW GRADE AS SHOWN.
3. AT EXISTING CONCRETE PAVEMENT WALK AREA, CONTRACTOR SHALL WATERBORE UNDERGROUND CONDUIT INSTALLATION BELOW CONCRETE WALKWAY PAVEMENT – NO SAW CUTTING ALLOWED.
4. IN THIS CONTRACT THE EXISTING PANELBOARD TO BE REMOVED AND REPLACE WITH NEW PANELBOARD SHOWN. CONTRACTOR SHALL RECONNECT AND, TIE IN EXISTING CIRCUITS AND FUTURE CONDUITS TO NEW PANEL BOARD INSTALLATION. CONTRACTOR SHALL INCLUDE ALL PATCH AND REPAIR WORK REQUIRED FOR THE INSTALLATION OF NEW PANEL AND ALL WALL AND/OR CEILING PATCH AND REPAIR WORK SHALL MATCH EXISTING.
5. FOR MOUNTING AND ANCHORING OF ATS SWITCHES REFER TO STRUCTURAL DETAIL 4/S-1.
6. TEMPORARY TRAILER TYPE 45KW/50KVA STANDBY GENERATOR SET 120/208V.,3ϕ.,4W COMPLETE WITH TEMPORARY FEEDER AND START CIRCUIT WIRING BETWEEN EXISTING "ATS-T". TEMPORARY GEN SET WITH FUEL TANK (6 HRS. RUN PERIOD) FOR TEMPORARY USE WHILE NEW GENERATOR INSTALLATION IS COMPLETE. ALLOW RENTAL OF GENERATOR AS REQUIRED TO COMPLETE THE PROJECT (TO ALLOW FOR CUT OVER DURING CONSTRUCTION).
7. FOR THE CONNECTION OF GENERATOR OIL HEATER AND BATTERY CHARGER, CONTRACTOR SHALL CONNECT TO (2) AVAILABLE 20A,1P SPARE CIRCUIT BREAKER WITHIN EXISTING PANEL.
8. NEW KOHLER POWER SYSTEM MODEL KCS AUTOMATIC TRANSFER SWITCH (800A, 4P SWITCH NEUTRAL) BRACE FOR 65,000 AIC, COMPLETE WITH MPAC PROGRAMMABLE CONTROLLER.
9. EXISTING ELECTRICAL PANEL TO REMAIN IN PLACE AND IN SERVICE FOR OWNER USE.
10. UNDERGROUND CONDUIT SYSTEM FOR OIL HEATER/BATTERY CHARGER BRANCH CIRCUITRY (4#10) AND ATS START/STOP CONTROL WIRING (6#12 CONTROL WIRES).
11. AT THIS LOCATION PROVIDE ON NEW "ATS-M" INSTALLATION NEW "LB" CONDULETS AND FOR CONTROL WIRING 6"SQ. PULL BOX (NEMA "3R") LABEL ATS/GENERATOR CONTROL WIRING AND HTR/CHARGER BRANCH CIRCUITRY.
12. PENETRATE THROUGH EXISTING WALL AND SWITCHGEAR MAIN SECTION NEW (2) 4" CONDUIT NIPPLES WITH NEW ELECTRICAL FEEDER WIRES. CONTRACTOR SHALL MAKE ALL FINAL CONNECTION REQUIRED – REFER TO SINGLE LINE DIAGRAM FOR WIRE SIZES, ADDITIONAL INFORMATION AND SCOPE OF WORK.
13. ELECTRICAL FEEDER RUN BELOW GRADE SHALL BE CONCRETE ENCASED WITH 3" ENVELOPE.
14. EXISTING ATS SWITCH SCHEDULE FOR REMOVAL – THE EXISTING ATS SWITCH MUST REMAIN IN PLACE, IN SERVICE AND BE CONNECTED TO TEMPORARY GENERATOR DURING CONSTRUCTION. CONTRACTOR SCOPE OF WORK INCLUDE:
    - A. SCHEDULING AND REMOVAL OF EXISTING ATS ONCE ALL THE NEW GENERATOR AND NEW ATS SWITCH INSTALLATION HAVE BEEN COMPLETED AND TESTED.
    - B. COMPLETE ALL DEMO AND REMOVED EXISTING ATS SWITCH, WHICH SHALL INCLUDE THE INSTALLATION OF NEW PULL BOX TO RECONNECT EXISTING AIRPORT TOWER ELECTRICAL PANEL ELECTRICAL FEEDER.
    - – AT EXISTING ATS SWITCH LOCATION CONTRACTOR SHALL PROVIDE 18"x 24"x 12"D. NEMA "3" PULL BOX AND CABLE SPLICE KIT FOR THE RECONNECTION OF EXISTING ELECTRICAL FEEDER.
15. PROVIDE TEMPORARY ELECTRICAL FEEDER 1 1/2"C.,4#1/0.,1#6G CU. FLEX CONDUIT BETWEEN TEMPORARY GENERATOR AND EXISTING ATS SWITCH. INSTALLATION SHALL INCLUDE ALL CONDUIT HARDWARE TO SECURE AND MAKE SAFE FEEDER INSTALLATION AT SITE.

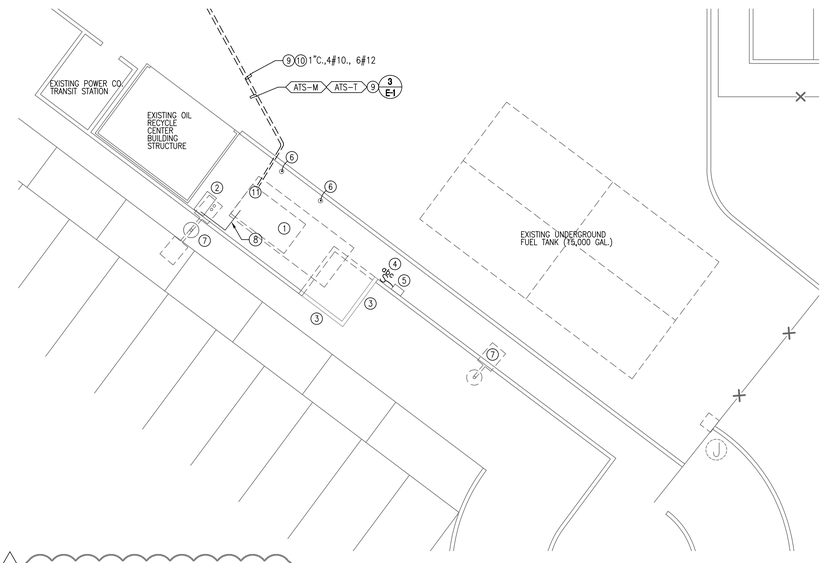
PROPOSED NEW ELECTRICAL DISTRIBUTION POWER FLOOR PLAN — SCALE: 1/8" = 1'-0" (2)



DEMOLITION NOTES:

1. EXISTING 45KW STANDBY GENERATOR SCHEDULE FOR REMOVAL. CONTRACTOR SHALL VERIFY IN FIELD THE EXISTING INSTALLATION TO DETERMINE ALL LABOR, TOOLS AND MATERIAL REQUIRED TO DEMO EXISTING INSTALLATION. WORK SHALL INCLUDE BUT NOT BE LIMITED TO:
    - A. ELECTRICALLY DISCONNECT, DEMO AND REMOVE EXISTING GENERATOR SET.
    - B. DEMO EXISTING CONCRETE HOUSEKEEPING PAD.
    - C. DEMO AND REMOVE EXISTING 1" FUEL LINE BETWEEN GENERATOR SET AND EXISTING PRYCO DAY TANK.
    - D. DEMO EXISTING ELECTRICAL FEEDER CONDUIT AND WIRES SERVING THE EXISTING GENERATOR WHICH IS SCHEDULE FOR REMOVAL.
2. EXISTING PRYCO FUEL DAY TANK TO REMAIN IN PLACE AND AND BE RE-USED IN THIS CONTRACT FOR INSTALLATION OF NEW 250 KW STANDBY GENERATOR. (PROVIDE ADD-ALTERNATE NO. 1 ON NEW REPLACEMENT OF FUEL DAY TANK).
3. TO MAKE AVAILABLE SPACE FOR NEW GENERATOR INSTALLATION, CONTACTOR SHALL DEMO EXISTING WALL.
4. EXISTING FUEL SYSTEM EMERGENCY-OFF SWITCHES TO BE REMOVED AND RELOCATED. SEE DETAIL PLANS 1/E-3.
5. EXISTING UNDERGROUND FUEL TANKS FUEL PUMP SYSTEM CONTROLS TO REMAIN IN PLACE AND IN SERVICE FOR CITY OF TORRANCE AIRPORT USE.
6. EXISTING CONCRETE BARRIER POST TO REMAIN IN PLACE.
7. EXISTING PARKING LOT LIGHT STANDARD TO REMAIN IN PLACE AND IN SERVICE FOR CITY OF TORRANCE AIRPORT USE.
8. EXISTING STUB-UP LOCATION OF (2) 2" UNDERGROUND FUEL LINES FROM THE EXISTING UNDERGROUND FUEL TANKS.
9. EXISTING EXPOSED FUEL LINE TO BE DEMO BETWEEN THE EXISTING DAY TANK AND EXISTING GENERATOR.

EXISTING GENERATOR SET PARTIAL DEMO SITE PLANS — SCALE: 1/8" = 1' – 0" (3)



INSTRUCTION TO BIDDER:

1. ADD-ALTERNATE NO. 1. (FOR NEW DAY TANK):

    CONTRACTOR SHALL DETERMINE ALL LABOR, TOOLS AND MATERIAL REQUIRED TO INSTALL NEW FUEL DAY TANK. WORK SHALL INCLUDE BUT NOT BE LIMITED TO:

    - A. NEW PRYCO DAY TANK #PY50 – 50 GALLONS DOUBLE WALL TANK TOTALLY ENCLOSED OUTER SHELL VENTED, UL LISTED.
    - B. DEMO AND REMOVAL (OFF SITE) OF EXISTING FUEL DAY TANK.
    - C. RECONNECTION OF ALL FUEL LINES TO AND FROM THE EXISTING UNDERGROUND DIESEL TANK, NEW DAY TANK AND NEW EMERGENCY GENERATOR SET.
    - D. ELECTRICAL CONNECTION OF DAY TANK PUMP RE-USING EXISTING BRANCH CIRCUITRY CURRENTLY SERVING THE EXISTING DAY TANK WHICH IS SCHEDULED TO BE REMOVED AND REPLACED.
    - E. SEGREGATE THE COST IN THE BID FOR THE ADD-ALTERNATE WORK.

REFERENCE NOTES:

1. NEW 250KW STANDBY GENERATOR SET – CONTRACTOR SHALL DETERMINE ALL LABOR, TOOLS AND MATERIAL REQUIRED TO INSTALL NEW GENERATOR SET. WORK SHALL INCLUDE BUT NOT BE LIMITED TO:
    - A. NEW WEATHERPROOF 240KW DIESEL STANDY-BY GENERATOR SET COMPLETE WITH 800A AUTO-TRANSFER SWITCH. CONTRACTOR SHALL PROVIDE AND MAKE ALL FINAL ELECTRICAL CONNECTIONS REQUIRED SEE DETAIL 2/E-1.
    - B. NEW 4" HIGH CONCRETE HOUSEKEEPING PAD (SEE STRUCTURAL DETAIL 3/SK-1)
    - C. PROVIDE AND INSTALL NEW FUEL LINE BETWEEN GENERATOR SET AND EXISTING PRYCO DAY TANK.
    - D. PROVIDE AND INSTALL ELECTRICAL FEEDER CONDUIT AND WIRES SERVING BETWEEN THE NEW GENERATOR SET, NEW AUTOMATIC TRANSFER SWITCH AND EXISTING MAIN SWITCHBOARD "MS".
    - E. FOR GENERATOR SET ANCHORING (REFER TO DETAIL 2/SK-1)
2. EXISTING PRYCO FUEL DAY TANK TO REMAIN IN PLACE AND AND BE RE-USED IN THIS CONTRACT FOR INSTALLATION OF NEW 250 KW STANDBY GENERATOR. (PROVIDE ADD-ALTERNATE NO. 1 ON NEW REPLACEMENT OF FUEL DAY TANK).
3. TO MAKE AVAILABLE SPACE FOR NEW GENERATOR INSTALLATION, CONTACTOR SHALL PROVIDE AND BUILT NEW 88" HIGH CMU BLOCK WALL. BLOCK WALL MATERIAL TO MATCH EXISTING IN COLOR AND FINISH. VERIFY EXISTING BLOCK WALL TO DETERMINE ALL LABOR TOOLS AND MATERIAL REQUIRED. REFER TO STRUCTURAL DETAIL 1/S-1.
4. NEW LOCATION OF FUEL SYSTEM EMERGENCY-OFF SWITCHES. SWITCH SHALL BE MOUNTED 4-8"A.F.F. FROM SWITCH PROVIDE 3/4"C.WITH #12 CA CONTRACTOR WIRES AS REQUIRED TO RECONNECT RELOCATED SWITCHES TO EXISTING FUEL CONTROLLER ON WALL.
5. EXISTING UNDERGROUND FUEL TANKS FUEL PUMP SYSTEM CONTROLLER TO REMAIN IN PLACE AND IN SERVICE FOR CITY OF TORRANCE AIRPORT USE.
6. EXISTING CONCRETE BARRIER POST TO REMAIN IN PLACE.
7. EXISTING PARKING LOT LIGHT STANDARD TO REMAIN IN PLACE AND IN SERVICE FOR CITY OF TORRANCE AIRPORT USE.
8. NEW (2) 1" BLACK-IRON FUEL LINES RUN EXPOSED ALONG WALL ON ON TOP OF SLAB TO NEW GENERATOR. CONTACTOR SHALL PROVIDE LABEL IDENTIFYING USE "FUEL LINES".
9. ELECTRICAL FEEDER RUN BELOW GRADE SHALL BE CONCRETE ENCASED WITH 3" ENVELOPE.
10. UNDERGROUND CONDUIT SYSTEM FOR OIL HEATER/BATTERY CHARGER BRANCH CIRCUITRY (4#10) AND ATS START/STOP CONTROL WIRING (6#12 CONTROL WIRES).
11. AT GENERATOR CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL FEEDERS, OIL HEATER AND BATTERY CHARGER ELECTRICAL CONNECTIONS PER MANUFACTURER RECOMMENDATION AND REQUIREMENTS.

NEW GENERATOR SET INSTALLATION PARTIAL SITE PLAN — SCALE: 1/8" = 1' – 0" (1)

REV.	DESCRIPTION	DATE	BY
	ADDENDUM NO.1	12/10/2013	CVK
	OMITTED SCOPE OF WORK REVISIONS TO CONTRACT	05/26/2013	CVK
	CLENT/PLAN CHECK ISSUANCE	07/30/2013	CVK

REGISTERED PROFESSIONAL ENGINEER — MURRAY BLITZ — NO. E012424 — 09-30-15 — ELECTRICAL — STATE OF CALIFORNIA

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PARTIAL DEMO AND NEW PROPOSED ELECTRICAL PLANS

GENERAL AVIATION CENTER TORRANCE MUNICIPAL AIRPORT

3301 AIRPORT DRIVE
TORRANCE, CALIF. 90505

DATE:	07/03/13
SCALE:	AS NOTED
PROJECT NUMBER:	307-13-001
DRAWN BY:	CVK/BS
CHECKED BY:	DM
DRAWING NUMBER	E-3

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